

CLAIMS

1. An spreader/grader, comprising:

a first runner having a forward edge portion, a bottom edge portion, and an aft edge portion;

a blade support having a first end portion and a second end portion, the first end portion of the blade support being attached to the first runner;

a second runner having a forward edge portion, a bottom edge portion, and an aft edge portion, the second runner being attached to the blade support in spaced and essentially parallel relation to the first runner;

a moldboard pivotally attached to the blade support;

a first blade having a cutting surface, the first blade being attached to the moldboard so that, when the runners are in operative connection with a surface to be worked by the apparatus and the apparatus is at rest, the cutting surface of the first blade faces approximately toward the forward edge portions of the first and second runners;

a second blade having a cutting surface, the second blade being attached to the moldboard so that, when the runners are in operative connection with a surface to be worked by the apparatus and the apparatus is at rest, the cutting surface of the second blade faces approximately toward the aft edge portions of the first and second runners;

the blade support, moldboard, first blade, and second blade being so configured that when the runners are in operative connection with a surface to be worked by the apparatus and forward motion is imparted to the apparatus, then the moldboard undergoes pivotal motion so that the first blade is placed in operative connection with the surface to be worked while the second blade is placed in a clearance position with respect to the surface to be worked, and when the runners are in operative connection with a surface to be worked by the apparatus and aft motion is imparted to the apparatus, then the moldboard undergoes pivotal motion so that the second blade is placed in operative connection with the surface to be worked while the first blade is placed in a clearance position with respect to the surface to be worked.

2. An apparatus according to claim 1, further comprising a first shoe attached to the bottom edge portion of the first runner and a second shoe attached to the bottom edge portion of the second runner, the first shoe and the second shoe being adapted for operative connection with the surface to be worked and being adapted to prevent wear of the first runner and the second runner.

3. An apparatus according to claim 1, further comprising:

first means for arresting pivotal motion and second means for arresting pivotal motion, the first means for arresting pivotal motion and the second means for arresting pivotal motion being adapted such that when forward motion is imparted to the apparatus, then the first means for arresting

pivotal motion stops the pivotal motion of the moldboard so that the first blade is placed in operative connection with the surface to be worked while the second blade is placed in a clearance position with respect to the surface to be worked; and

when aft motion is imparted to the apparatus, then the second means for arresting pivotal motion stops the pivotal motion of the moldboard so that the second blade is placed in operative connection with the surface to be worked while the first blade is placed in a clearance position with respect to the surface to be worked.

4. An apparatus according to claim 3, wherein:

the first means for arresting pivotal motion and the second means for arresting pivotal motion are adapted so that when the pivotal motion of the mounts is arrested during forward motion of the apparatus and the first blade is placed in operative connection with the surface to be worked, the orientation of the first blade will be adapted for the particular work that is performed and the surface being worked; and

when the pivotal motion of the mount is arrested during aft motion of the apparatus, and the second blade is placed in operative connection with the surface to be worked, the orientation of the second blade will be adapted for the particular work that is performed and the surface being worked.

5. An apparatus for spreading and grading, comprising:

a frame connectible to a draft vehicle, the frame having first and second runners disposed in generally parallel relation to each other with each runner having a forward edge portion, a bottom edge portion, and an aft edge portion;

a blade support operatively connected thereto;

a moldboard pivotally attached to the blade support;

a first blade having a cutting surface, the first blade being attached to the moldboard so that, when the runners are in operative connection with a surface to be worked by the apparatus and the apparatus is at rest, the cutting surface of the first blade faces approximately toward the forward edge portions of the first and second runners;

a second blade having a cutting surface, the second blade being attached to the moldboard so that, when the runners are in operative connection with a surface to be worked by the apparatus and the apparatus is at rest, the cutting surface of the second blade faces approximately toward the aft edge of the first and second runners;

the blade support, moldboard, first blade, and second blade being so configured that when the runners are in operative connection with a surface to be worked by the apparatus and forward motion is imparted to the apparatus, then the moldboard undergoes pivotal motion so that the first blade is placed in operative connection with the surface to be worked

while the second blade is placed in a clearance position with respect to the surface to be worked, and when the runners are in operative connection with a surface to be worked by the apparatus and aft motion is imparted to the apparatus, then the moldboard undergoes pivotal motion so that the second blade is placed in operative connection with the surface to be worked while the first blade is placed in a clearance position with respect to the surface to be worked.

6. An apparatus according to claim 5, wherein the frame comprises a pair of parallel, ground-engaging runners rigidly interconnected by means for rigid transverse connection.
7. An apparatus according to claim 6, wherein said means for rigid transverse connection comprises a rigid member disposed between the runners and rigidly attached to both runners.